

APPENDIX J:

**OVERVIEW OF MEXICO PERMITS
FOR THE LRPC AND TDM POWER PLANTS**

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This appendix provides an overview of the permitting process required in Mexico for construction and operation of the La Rosita Power Complex (LRPC) and the Termoeléctrica de Mexicali (TDM) power plants based on information provided by the power plant companies (Kiernan 2004; Abreu 2004). The following sections summarize the regulatory requirements, agency responsibilities, and permits and approvals obtained by the power plant companies.

J.1 REGULATORY REQUIREMENTS

The General Law of Ecological Equilibrium and Environmental Protection (Ley General del Equilibrio Ecológico y la Protección al Ambiente (LGEEPA, hereafter referred to as the “General Ecology Law”) establishes the overall regulatory framework for environmental compliance in Mexico. The General Ecology Law, as amended, sets forth control and safety measures, penalties for noncompliance, and guidelines for environmental impact statements (EISs) and risk assessments. It is implemented through five sets of regulations that encompass the general areas of environmental impact, atmospheric pollution, hazardous waste, pollution generated by motor vehicles, and noise emissions (Gonzales and Gastelum 1999).

The specific requirements for the preparation and approval of Environmental Impact Assessments, equivalent to EISs and known in Mexico as Manifestaciones de Impacto Ambiental or MIAs, are set forth in the set of regulations of the General Ecology Law known as the Regulations of the General Law of Ecological Equilibrium and Environmental Protection for Matters Related to Environmental Impact (Reglamento de la Ley General del Equilibrio Ecológico y Protección al Ambiente en Materia de Impacto Ambiental), promulgated on June 7, 1988. These regulations require that an MIA be prepared for a project under Mexico Federal jurisdiction and submitted to the National Institute of Ecology (Instituto Nacional de Ecología or INE) for approval prior to beginning construction. For industrial projects, an assessment of potential safety risks associated with facility operations (a “risk study”) also must be submitted to the INE for approval.

The 1996 amendment of the LGEEPA authorized the Mexico government to issue environmental standards, known as Normas Oficiales Mexicanas (NOMs) (Gonzales and Gastelum 1999). To date, more than 250 NOMs have been established to regulate areas such as air emissions, wastewater discharges, hazardous waste, and health and safety. Table J-1 summarizes the NOMs applicable to the power plant projects.

TABLE J-1 Applicable Mexico Environmental Standards and Regulations

Regulation Number	Description	Technical Area
NOM-043-ECOL-1993	Maximum permissible limits of solid particulates from stationary sources	Air quality
NOM-085-ECOL-1994	Maximum permissible limits of smoke, total suspended particulates, sulfur dioxide (SO ₂), and nitrogen oxides (NO _x) from stationary sources	Air quality
NOM-086-ECOL-1994	Environmental specifications for liquid and gaseous fuels used in stationary and mobile sources	Air quality
NOM-020-SSAI-1993	Ambient air quality standards for ozone (O ₃) concentration values for protection of public health	Air quality
NOM-021-SSAI-1993	Ambient air quality standards for carbon monoxide (CO) for protection of public health	Air quality
NOM-022-SSAI-1993	Ambient air quality standards for SO ₂ for protection of public health	Air quality
NOM-023-SSAI-1993	Ambient air quality standards for nitrogen dioxide (NO ₂) for protection of public health	Air quality
NOM-024-SSAI-1993	Ambient air quality standards for total suspended solids for protection of public health	Air quality
NOM-025-SSAI-1993	Ambient air quality standards for particulate matter smaller than 10 micrometers for protection of public health	Air quality
NOM-001-ECOL-1996	Maximum permissible limits of pollutants in wastewater discharges to national receiving bodies	Water quality
NOM-002-ECOL-1996	Maximum permissible levels of contaminants in wastewater discharges to municipal or urban sewage systems	Water quality
NOM-081-ECOL-1994	Noise emission standards for stationary sources	Noise
NOM-059-ECOL-1994	Ecological criteria to determine which species are endangered, rare, on the verge of extinction, or subject to special protection	Endangered species
NOM-052-ECOL-1993	Hazardous waste characteristics and list	Hazardous waste
NOM-054-ECOL-1993	Procedure for determination of incompatibility between two or more hazardous wastes	Hazardous waste
NOM-114-ECOL-1998	Environmental protection for the planning, design, construction, operation, and maintenance of communication and transmission lines located in urban, suburban, rural, farming, and industrial areas	Electric power transmission lines

J.2 AGENCY RESPONSIBILITIES

J.2.1 Federal Regulatory Agencies

The Secretariat of Environment and Natural Resources (Secretaría del Medio Ambiente y Recursos Naturales, SEMARNAT) is the government agency with primary responsibility in Mexico for developing and implementing policy and regulations relating to natural resource management and environmental protection. In general, SEMARNAT has the following responsibilities:

- Formulating national environmental policies and coordinating all activities relating to the protection, restoration, and conservation of ecosystems and natural resources with the aim of achieving sustainable development.
- Issuing Mexico official environmental standards (i.e., NOMs) pertaining to the sustainable use of natural resources, preservation, environmental quality, flora, fauna, wastewater discharges, mining, hazardous materials, and hazardous and solid wastes.
- Evaluating Environmental Impact Assessments (i.e., MIAs) for development projects proposed by the public and private sectors.
- Managing the use of national waters, setting conditions for wastewater discharges into national receiving bodies (including soil and infiltration into aquifers), and organizing projects for the improvement of national dams.
- Establishing, in coordination with other agencies and entities, economic instruments for the protection, restoration, and conservation of the environment.

Several governmental agencies fall under the jurisdiction of SEMARNAT, including the National Water Commission (Comisión Nacional del Agua, CNA), the National Institute of Ecology (Instituto Nacional de Ecología, INE), and the Federal Agency for the Protection of the Environment (Procuraduría Federal de Protección al Ambiente, PROFEPA) (Gonzales and Gastelum 1999).

The National Water Commission is responsible for the quality and preservation of national waters and related real property such as wetlands, marshes, and beaches. It oversees compliance with the Law of National Waters (Ley de Aguas Nacionales), and it regulates and issues permits to discharge wastewater into federally chartered receiving bodies, such as rivers, lakes, soil, and groundwater.

The INE is responsible for ecological matters and the protection of the environment. It develops environmental programs, issues administrative orders and standards, determines the

adequacy (and grants federal approval) of environmental impact assessments (i.e., MIAs), and coordinates the development of environmental programs with state agencies.

The PROFEPA is the primary Mexico federal agency authorized to enforce environmental laws in Mexico, including the regulations for management and disposal of hazardous and industrial waste and air emissions. It is responsible for investigations and inspections of facilities and is in charge of the prosecution of environmental crimes.

J.2.2 State and Local Regulatory Authorities

Nonfederal issues and environmental matters in Mexico are under the jurisdiction of the respective states and municipalities. The policies of the states and municipalities must meet Mexico federal requirements. The state and local governments are responsible for land use licensing, construction permitting, regulating air emissions from nonfederal activities, regulating solid waste disposal, and permitting for water supply from local networks discharging to municipal sewage systems.

The Dirección de Ecología de Estatal de Baja California (Ecology Directorate of the State of Baja California) is responsible for issuing environmental permits for all state facilities that are not under Mexico federal jurisdiction and for the management and disposal of nonhazardous solid waste within the state.

The Comisión de Estatal de Servicios Públicos de Mexicali (CESPM, the State Commission of Public Services of Mexicali) regulates the supply of drinking water, wastewater, and treated water as well as treatment and recycling of wastewater within the Municipality of Mexicali.

J.3 PERMITS AND APPROVALS

The LRPC and TDM power plants obtained several Mexico permits and approvals applicable to the construction and operation of their respective facilities, falling into these general categories:

- Environmental (e.g., air quality, noise, geology/soils, endangered species, solid and hazardous waste, and risk assessment);
- Safety;
- Construction (e.g., crane and hoisting equipment licenses, rights-of-way and land use authorizations);
- Communications equipment;
- Occupancy;

- Sanitation;
- Hydrostatic testing;
- Fire department and civil protection;
- Federal land use concessions;
- Import and export of electrical power; and
- Mechanical and heating, ventilation, and air conditioning (HVAC) installation and pressure vessel registry.

These permits and approvals are described in more detail in the following sections.

J.3.1 La Rosita Power Complex

The construction and operation of the two units at the LRPC — Energiá de Baja California (EBC) and Energiá Azteca X (EAX) — required a series of permits and approvals from various Mexico regulatory authorities. Because the EBC and EAX units include separate transmission lines, with the EBC line connecting at the U.S. border with a new transmission line owned and operated by Baja California Power, Inc., and the EAX line connecting to the electric power grid in Mexico, each unit was subject to independent permitting requirements, and each unit obtained its own permits and approvals (Table J-2).

Intergen submitted the MIA (the equivalent of an EIS) for the EAX unit to the INE on August 15, 2000; it was approved on November 15, 2000. The MIA for the EBC unit was submitted to the INE on April 6, 2001; it was approved on June 28, 2001. These authorizations extend to the new transmission lines included as part of each unit.

J.3.2 Termoeléctrica de Mexicali

The construction and operation of the TDM power plant required a series of permits and approvals from various Mexican regulatory authorities (Table J-2). Sempra reports that more than 50 permits, licenses, or other authorizations were obtained from at least 8 different agencies and subagencies of the Mexico government. The TDM plant also entered into a contract with CESPM for the supply of sewage water to be treated at the wastewater plant for the power plant. The INE approved the MIA for the TDM plant on January 23, 2001.

TABLE J-2 Primary Permits and Approvals Obtained by the LRPC and TDM Power Plants

Permit or Approval Type	Permitting or Approval Agency	Description of Requirement
Manifestación de Impacto Ambiental (MIA)	<ul style="list-style-type: none"> SEMARNAT INE 	Project-specific MIA required for power facilities that will generate more than 3 MW of electricity; the assessment also covers ancillary facilities, including transmission lines.
Risk study	<ul style="list-style-type: none"> SEMARNAT INE 	Assessment of potential safety risks required for industrial facilities, including power plants.
Construction permit/license	<ul style="list-style-type: none"> Municipality of Mexicali 	Required for construction activities at the facility.
Independent power producer permit	<ul style="list-style-type: none"> Comisión Reguladora de Energía (CRE, Energy Regulatory Commission) 	Permit required for independent power generation
Power import permit	<ul style="list-style-type: none"> CRE 	Permit required for the importation of power for use at the facilities, including for start-up.
Power export permit	<ul style="list-style-type: none"> CRE 	Permit required to export power outside of Mexico.
Land use/property ownership	<ul style="list-style-type: none"> CNA Municipality of Mexicali 	License required for industrial land use; right-of-way permit required for installation of pipelines (water and wastewater) and transmission lines crossing local roads, railroad tracks, and private lands.
Pressurized vessels/steam generators	<ul style="list-style-type: none"> Ministry of Labor and Social Welfare (STPS) 	Authorization required to operate pressurized vessels and steam generators.
Environmental operating license	<ul style="list-style-type: none"> SEMARNAT 	Environmental operating license required for all facilities, requiring compliance with the MIA, the wastewater discharge authorization, and other Mexico environmental laws.
Waste disposal authorization	<ul style="list-style-type: none"> SEMARNAT 	Authorization required for the off-site disposal of nonhazardous waste.
Wastewater discharge	<ul style="list-style-type: none"> CNA 	Permit required to discharge wastewater into national receiving bodies (i.e., canals that discharge to the New River).

Source: Kiernan (2004); Abreu (2004).

J.4 REFERENCES

Abreu, A., 2004, "Power Plant Permitting Summary (TDM Power Plant)," personal communication from Abreu (Sempra Energy Resources, Inc., San Diego, Calif.) to K. Picel (Argonne National Laboratory, Argonne, Ill.), Oct. 6.

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